L15 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2007:360773 CAPLUS Full-text

DN 147:9874

TI Parallel Synthesis of a Novel C2-Aryl Pyrrolo[2,1-c][1,4]benzodiazepine (PBD) Library

AU Antonow, Dyeison; Cooper, Nectaroula; Howard, Philip W.; Thurston, David E.

CS Spirogen Limited, London, NW1 ONH, UK

Journal of Combinatorial Chemistry (2007), 9(3), 437-445 CODEN: JCCHFF; ISSN: 1520-4766

PB American Chemical Society

DT Journal

LA English

OS CASREACT 147:9874

GT

AB A 66-membered library of C2-aryl pyrrolo[2,1-c][1,4]benzodiazepines I [R = Ph, 4-MeOC6H4, 3-H2NC6H4, 2-F3CC6H4, 4-(4-methyl-1-piperazinyl)phenyl 2-thienyl, 4-pyridyl, 2-naphthyl, etc.] has been successfully prepared by parallel synthesis via Suzuki coupling using polystyrene-bound Fd(Fh3)4 as catalyst and polystyrene-bound diethanolamine as scavenger under microwave irradiation Library members were obtained in sufficient yields (up to 91%) and purity (85-98% crude) for biol. evaluation.

IT 864754-74-5P 937720-37-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(parallel synthesis of aryl-substituted

pyrrolo[2,1-c][1,4]benzodiazepine library via Suzuki coupling under microwave irradiation)

RN 864754-74-5 CAPLUS

N 1H-Pyrrolo[2,1-c][1,4]benzodiazepine-10(5H)-carboxylic acid, 11-[[(1,1-dimethylethyl)dimethylsilyl]oxy]-11,11a-dihydro-7,8-dimethoxy-5-oxo-2-[[(trifluoromethyl)sulfonyl]oxy]-, 2,2,2-trichloroethyl ester, (115,11a5)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

RN 937720-37-1 CAPLUS

CN 1H-Pyrrolo[2,1-c][1,4]benzodiazepine-10(5H)-carboxylic acid,
11-[[(1,1-dimethylethyl)dimethylsilyl]oxy]-11,11a-dihydro-7,8-dimethoxy-2(4-methoxyphenyl)-5-oxo-, 2,2,2-trichloroethyl ester, (11S,11aS)- (CA
INDEX NAME)

RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L15 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2006:1124678 CAPLUS Full-text
DN
   145:455035
TI
   Preparation of pyrrolobenzodiazepine derivatives for treatment of
    proliferative diseases
IN
    Gregson, Stephen John; Howard, Philip Wilson; Chen, Zhizhi
PA
    Spirogen Limited, UK
SO
    PCT Int. Appl., 77pp.
    CODEN: PIXXD2
    Patent
LA
   English
FAN.CNT 1
    PATENT NO.
                     KIND DATE APPLICATION NO. DATE
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                                        _____
                                                             _____
                      A1 20061026 WO 2006-GB1456 20060421
    WO 2006111759
PΤ
        W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
            CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
            GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR,
            KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX,
           MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE,
            SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
           VN, YU, ZA, ZM, ZW
        RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
            IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
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CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,

20061026 CA 2006-2604805

20080109 GB 2007-20721

20060421

20060421

20071011

20071018 20071019

20071108

20071120

A1 20061026 AU 2006-238686

A1 20080123 EP 2006-726846 R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR

	JP	2008536905	T	20080911	JP	2008-507165
	IN	2007DN07862	A	20071109	IN	2007-DN7862
	US	20080167293	A1	20080710	US	2007-911890
	MX	2007013039	A	20080313	MX	2007-13039
	CN	101171257	A	20080430	CN	2006-80015716
	KR	2008004618	A	20080109	KR	2007-727047
PRAI	GB	2005-8084	A	20050421		
	GB	2005-22746	A	20051107		
	WO	2006-GB1456	W	20060421		
os	CAS	SREACT 145:455035;	MARPA:	T 145:455035		

KG, KZ, MD, RU, TJ, TM

A1

A

AU 2006238686 CA 2604805

GB 2439881

EP 1879901

GT

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The title compds. with general formula I [wherein: R2 = (un)substituted aryl; R6 and R9 = independently H, R, OH, OR, SH, SR, NH2, NHR, NRR', nitro, Me3Sn, or halo, where R and R' = independently (un) substituted alkyl, heterocyclyl, or aryl; R7 = H, R, OH, OR, SH, SR, NH2, NHR, NHRR', nitro, Me3Sn, or halo; Z = alkylene; X = 0, S, or NH; n = 2 or 3] or pharmaceutically acceptable salts or solvates thereof are prepared for the treatment of proliferative diseases. For example, compound II.2Na was prepared in a multi-step synthesis. II.2Na showed IC50 of 1.5 nM in the In Vitro cytotoxicity test with K562 human chronic mveloid leukemia cells.

864754-61-0P 864754-66-5P 913262-19-8P 913262-01-2P 913262-23-4P 913260-24-5P 913262-26-7P 913262-28-9P 913262-38-1P

617262-36-26

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (preparation of pyrrolobenzodiazepine derivs. for treatment of proliferative diseases)

RN 864754-61-0 CAPLUS

CN IH-Pyrrolo[2,1-c][1,4]benzodiazepine-10(5H)-carboxylic acid,
8,8'-[1,3-propanediylbis(oxy)]bis[11-[[(1,1dimethylethyl)dimethylsilyl]oxy]-11,1la-dihydro-7-methoxy-5-oxo-2[[(trifluoromethyl)sulfonyl]oxy]-, bis[2,2,2-trichloroethyl) ester,
(115,112,112,114S)-[901] (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

PAGE 1-B

- RN 864754-66-5 CAPLUS

- RN 913262-19-8 CAPLUS
- CN 1H-Pyrrolo[2,1-c][1,4]benzodiazepine-10(bH)-carboxylic acid, 8,8'-[1,3-propanediylbis(oxy)]bis[11-[[(1,1dimethylethyl)dimethylsilyl]oxy]-11,1la-dihydro-7-methoxy-2-(2naphthalenyl)-5-oxo-, bis(2,2,2-trichloroethyl) ester, (115,11's,1las,11'as)-(9C1) (CA INDEX NAME)

PAGE 1-B

- RN 913262-21-2 CAPLUS
- CN H-Pyrrolo[2,1-c][1,4]benzodiazepine-10(5H)-carboxylic acid, 8,8'-[1,3-propanediylbis(oxy]]bis[11-[[(1,1-dimethylathyl)dimethylsilyl]oxy]-11,1la-dihydro-7-methoxy-5-oxo-2-(2-dimethylathyl)dimethylsilyl]oxy]-11,1la-dihydro-7-methoxy-5-oxo-2-(2-dimethylathyl)dimethylsilyl]oxy]-11,1la-dihydro-7-methoxy-5-oxo-2-(2-dimethylathyl)dimethylsilyl]oxy]-11,1la-dihydro-7-methoxy-5-oxo-2-(2-dimethylathyl)dimethylsilyl]oxy]-11,1la-dihydro-7-methoxy-5-oxo-2-(2-dimethylathyl)dimethylsilyl]oxy]-11,1la-dihydro-7-methoxy-5-oxo-2-(2-dimethylathyl)dimethylsilyl]oxy]-11,1la-dihydro-7-methoxy-5-oxo-2-(2-dimethylathyl)dimethylsilyl]oxy]-11,1la-dihydro-7-methoxy-5-oxo-2-(2-dimethylathyl)dimethylsilyl]oxy]-11,1la-dihydro-7-methoxy-5-oxo-2-(2-dimethylathyl)dimethylsilyl]oxy]-11,1la-dihydro-7-methoxy-5-oxo-2-(2-dimethylathyl)dimethylsilyl]oxy]-11,1la-dihydro-7-methoxy-5-oxo-2-(2-dimethylathyl)dimethylsilyl]oxy]-11,1la-dihydro-7-methoxy-5-oxo-2-(2-dimethylathyl)dimethylsilyl]oxy]-11,1la-dihydro-7-methoxy-5-oxo-2-(2-dimethylathyl)dimethylsilyl]oxy]-11,1la-dihydro-7-methoxy-5-oxo-2-(2-dimethylathyl)dimethylsilyl]oxy]-11,1la-dihydro-7-methoxy-5-oxo-2-(2-dimethylathyl)dimethylsilyl]oxy]-11,1la-dihydro-7-methoxy-5-oxo-2-(2-dimethylathyl)dimethylsilyl]oxy]-11,1la-dihydro-7-methoxy-5-oxo-2-(2-dimethylathyl)dimethylsilyl]oxy]-11,1la-dihydro-7-methoxy-5-oxo-2-(2-dimethylathyl)dimethylsilyl]oxy]-11,1la-dihydro-7-methoxy-5-oxo-2-(2-dimethylathyl)dimethylsilyl]oxy]-11,1la-dihydro-7-methoxy-5-oxo-2-(2-dimethylathyl)dimethylsilyl]oxy]-11,1la-dihydro-7-methoxy-5-oxo-2-(2-dimethylathyl)dimethylsilyl]oxy]-11,1la-dihydro-7-methoxy-5-oxo-2-(2-dimethylathylathylathyl)dimethylsilyllighyllig

thienyl)-, bis(2,2,2-trichloroethyl) ester, (11S,11'S,11aS,11'aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-B

RN 913262-23-4 CAPLUS

CN 1H-Pyrrolo[2,1-c][1,4]benzodiazepine-10(5H)-carboxylic acid,
8,8'-[1,3-propanediylbis(oxy)]bis[11-[[(1,1dimethylethyl)dimethylsilyl]oxy]-11,1la-dihydro-7-methoxy-5-oxo-2-(7quinolinyl)-, bis(2,2,2-trichloroethyl) ester, (118,11'8,11a8,11'a8)(9C1) (CA INDEX NAME)

RN 913262-24-5 CAPLUS

CN 1H-Pyrrolo[2,1-c][1,4]benzodiazepine-10(5H)-carboxylic acid, 8,8'-[1,3-propanediylbis(oxy)]bis[11-[[(1,1dimethylethyl)dimethylsilyl]oxy]-11,1la-dihydro-7-methoxy-2-(3methoxyphenyl)-5-oxo-, bis(2,2,2-trichloroethyl) ester, (115,11's,1las,1'1's5)-(9C1) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-B

- RN 913262-26-7 CAPLUS
- CN 1H-Pyrrolo[2,1-c][1,4]benzodiazepine-10(5H)-carboxylic acid, 8,8'-[1,3-propanediylbis(oxy]]bis[2-(1,3-benzodioxol-5-yl)-11-[[(1,1-dimethylethyl)dimethylsilyl]oxy]-11,11a-dihydro-7-methoxy-5-oxo-, bis(2,2,2-trichloroethyl) ester, (115,11'5,11a5,11'a5)- (9CI) (CA INDEX NAME)

PAGE 1-B

- RN 913262-28-9 CAPLUS
- CN 1H-Pyrrolo[2,1-c][1,4]benzodiazepine-10(5H)-carboxylic acid, 8,8'-[1,3-propanediylbis(oxy)|bis[11-[[(1,1dimethylethyl)dimethylsilyl]oxy]-2-(4-fluorophenyl)-11,11a-dihydro-7methoxy-5-oxo-, bis(2,2,2-trichloroethyl) ester, (11S,11'S,11aS,11'aS)-(9C1) (CA INDEX NAME)

PAGE 1-B

RN 913262-38-1 CAPLUS

CN 1H-Pyrrolo[2,1-c][1,4]benzodiazepine-10(5H)-carboxylic acid,
8,8'-[1,5-pentanediylbis(oxy)]bis[11-[[(1,1dimethylethyl)dimethylislyl]oxy]-11,1la-dihydro-7-methoxy-5-oxo-2[[(trifluoromethyl)sulfonyl]oxy]-, bis(2,2,2-trichloroethyl) ester,
(115,11's,11as,11'aS)- (9C1) (CA INDEX NAME)

RN 913262-39-2 CAPLUS

CN 1H-Pyrrolo[2,1-c][1,4]benzodiazepine-10(5H)-carboxylic acid,
8,8'-[1,5-pentanediylbis(oxy)]bis[11-[[(1,1dimethylethyl)dimethylsilyl]oxy]-11,1la-dihydro-7-methoxy-2-(4methoxyphenyl)-5-oxo-, bis[2,2,2-trichloroethyl] ester,
(115,11's,1las,11'as)- (9C1) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-B

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L15 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2005:1004748 CAPLUS Full-text
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DN 143:306348

TI Preparation of pyrrolobenzodiazepinone derivatives as antitumor agents TN Howard, Philip Wilson; Gregson, Stephen John

PA Spirogen Limited, UK

SO PCT Int. Appl., 88 pp. CODEN: PIXXD2

DT Pat.ent.

LA English FAN.CNT 1

GI

	PATENT NO.			KIND DATE		APPLICATION NO.													
PI	WO 2005085251			A1	1 20050915		WO 2005-GB768												
		W:	ΑE,	AG,	AL,	AM,	AT,	AU,	AZ,	BA,	BB,	BG,	BR,	BW,	BY,	BZ,	CA,	CH,	
			CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	EG,	ES,	FI,	GB,	GD,	
			GE,	GH,	GM,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,	KG,	KP,	KR,	KZ,	LC,	
			LK,	LR,	LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NA,	NI,	
			NO,	NZ,	OM,	PG,	PH,	PL,	PT,	RO,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	SM,	
			SY,	TJ,	TM,	TN,	TR,	TT,	TZ,	UA,	UG,	US,	UZ,	VC,	VN,	YU,	ZA,	ZM,	ZW
		RW:	BW,	GH,	GM,	KE,	LS,	MW,	MZ,	NA,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	AM,	
			AZ,	BY,	KG,	KZ,	MD,	RU,	TJ,	TM,	AT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	
			EE,	ES,	FI,	FR,	GB,	GR,	HU,	IE,	IS,	IT,	LT,	LU,	MC,	NL,	PL,	PT,	
			RO,	SE,	SI,	SK,	TR,	BF,	ВJ,	CF,	CG,	CI,	CM,	GA,	GN,	GQ,	GW,	ML,	
			MR,	NE,	SN,	TD,	TG												
	AU	2005	2196	26		A1		2005	0915		AU 2	005-	2196	26		2	0050	301	
	CA	2558	195			A1		2005	0915		CA 2	005-	2558	195		2	0050	301	
	EP	1720	881			A1		2006	1115		EP 2	005-	7178	46		2	0050	301	
		R:	AT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FI,	FR,	GB,	GR,	HU,	IE,	
			IS,	IT,	LI,	LT,	LU,	MC,	NL,	PL,	PT,	RO,	SE,	SI,	SK,	TR			
	JP	2007	5255	35		T		2007	0906		JP 2	007-	5013	40		2	0050	301	
	US	2007	0173	497		A1		2007	0726		US 2	007-	5985	18		2	0070	206	
PRAI	GB	2004	-457	5		A		2004	0301										
	GB	2004	-263	92		A		2004	1201										
	WO	2005	-GB7	68		W		2005	0301										
os	CAS	SREAC	T 14	3:30	6348	; MAI	RPAT	143	:306	348									

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Title compds. I [R1 = labile leaving group, alkenyl or substituted phenyl; R2 AB and R5 independently = H, OH, SH, etc.; R3 and R4 independently = H, NH2, halo, etc. or the compound is a dimer with each monomer being of formula I, where the R3 and R4 groups of each monomer form together a dimer bridge -X-R-X-; R = alkylene group, which may be interrupted by heteroatoms or aromatic rings; X = O, S or NH; R6 = carbamate-based N-protecting group; R7 = oxygen protecting group or OH or R6 and R7 together form double bond between N10 and C11] and their pharmaceutically acceptable salts, are prepared and disclosed as antitumor agents. Thus, e.g., II was prepared by palladium catalyzed coupling of III (preparation given) with trans-propenylboronic acid followed by deprotection. The in vitro cytotoxicity of I towards K562 human chronic myeloid leukemia cells was evaluated using ELISA assay and it was revealed that selected compds. of the invention displayed IC50 values of less than 1 uM. I should prove useful in the treatment of proliferative diseases such as

leukemia. Pharmaceutical compns. comprising I are disclosed. 864754-61-0P 864754-63-2P 364754-66-5P

864754-70-1P 864754-72-3P 864754-74-5P

864754-75-6P

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic

preparation); THU (Therapeutic use); BIOL (Biological study); PREP
(Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation of pyrrolobenzodiazepinone derivs. as antitumor agents)

RN 864754-61-0 CAPLUS

CN 1H-Pyrrolo[2,1-c][1,4]benzodiazepine-10(5H)-carboxylic acid,
8,8'-[1,3-propanediylbis(oxy)]bis[11-[[(1,1dimethylethyl]dimethylsilyl]oxy]-11,11a-dihydro-7-methoxy-5-oxo-2[[(trifluoromethyl)sulfonyl]oxy]-, bis(2,2,2-trichloroethyl) ester,
(115,11's,11as,1'as)- (SCI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

PAGE 1-B

RN 864754-63-2 CAPLUS

CN 1H-Pyrrolo[2,1-c][1,4]benzodiazepine-10(5H)-carboxylic acid, 8,8'-[1,3-propanediylbis(oxy)]bis[2-[(1E)-3-(dimethylamino)-3-oxo-1propenyl]-11-[[(1,1-dimethylethyl)dimethylsily]loxy]-11,11a-dihydro-7methoxy-5-oxo-, bis(2,2,2-trichloroethyl) ester, (11S,11'S,11aS,11'aS)-(9C1) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+). Double bond geometry as shown.

- RN 864754-66-5 CAPLUS
- CN 1H-Pyrrolo[2,1-c][1,4]benzodiazepine-10(bH)-carboxylic acid,
 8,8'-[1,3-propanediylbis(oxy)]bis[11-[1](1,1dimethylethyl)dimethylsilylloxy]-11,1la-dihydro-7-methoxy-2-(4methoxyphenyl)-5-oxo-, bis[2,2,2-trichloroethyl) ester,
 (115,112,112,114s)- (9C1) (CA INDEX NAME)

PAGE 1-B

- RN 864754-70-1 CAPLUS
- CN 1H-Pyrrolo[2,1-c][1,4]benzodiazepine-10(5H)-carboxylic acid,
 8,8'-[1,3-propanediylbis(oxy)]bis[11-[[(1,1dimethylethyl)dimethylsilyl]oxy]-11,1la-dihydro-7-methoxy-5-oxo-2-(1E)-1propenyl-, bis(2,2,2-trichloroethyl) ester, (11S,11's,11aS,11'aS)- (9CI)

Absolute stereochemistry. Rotation (+). Double bond geometry as shown.

PAGE 1-B

- RN 864754-72-3 CAPLUS
- CN 1H-Pyrrolo[2,1-c][1,4]benzodiazepine-10(5H)-carboxylic acid, 8,8'-[1,3-propanediylbis(oxy)]bis[11-[(1,1-dinethylethyl)dimethylsiy]loxy]-11,1la-dihydro-7-methoxy-5-oxo-2-(phenylethynyl)-, bis(2,2,2-trichlorosthyl) ester, (118,11'8,11a8,11'aS)-(9C1) (CA INDEX NAME)

- RN 864754-74-5 CAPLUS
- CN 1H-Pyrrolo[2,1-c][1,4]benzodiazepine-10(5H)-carboxylic acid,
 11-[[(1,1-dimethylethyl)dimethylsilyl)oxy]-11,11a-dihydro-7,8-dimethoxy-5oxo-2-[[(trifluoromethyl)sulfonyl]oxy]-, 2,2,2-trichloroethyl ester,
 (115,11a5)- (9C1) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

- RN 864754-75-6 CAPLUS
- CN 1H-Pyrrolo[2,1-c][1,4]benzodiazepine-10(5H)-carboxylic acid, 11-[[(1,1-dimethylethyl)dimethylsilyl]oxy]-11,1la-dihydro-7,8-dimethoxy-5oxo-2-(1E)-1-propen-1-yl-, 2,2,2-trichloroethyl ester, (11S,11aS)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+). Double bond geometry as shown.

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L15 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2009 ACS on STN
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AN 1981:139855 CAPLUS Full-text

DN 94:139855

OREF 94:22905a,22908a Benzodiazepines TI

PA Green Cross Corp., Japan

SO Belg., 24 pp.

CODEN: BEXXAL DT Patent

LA French

FAN.CNT 1 PATENT NO. KIND DATE APPLICATION NO. -----BE 882305 19800716 BE 1980-199851 PΤ A1 19800319 JP 56015289 19810214 JP 1979-89886 19790717 A JP 62037631 В 19870813 SE 8001458 A 19810118 SE 1980-1458 19800225 SE 436882 В 19850128 SE 436882 С 19850509 CA 1152985 A1 19830830 CA 1980-346511 19800227 US 4309437 A 19820105 US 1980-127984 19800304 GB 2053894 Α 19810211 GB 1980-8033 19800310 GB 2053894 В 19830420 NL 8001531 A 19810120 NL 1980-1531 19800314 DE 3010544 A1 DE 1980-3010544 19810129 19800319 DE 3010544 C2 19820701 FR 2461711 A1 19810206 FR 1980-6153 19800319 FR 2461711 B1 19830513 CH 648848 A5 19850415 CH 1980-2187 19800320 PRAI JP 1979-89886 A 19790717

OS MARPAT 94:139855

GI

http://www.uspto.gov

Pyrrolobenzodiazepines I (R = H, acyl, CONH2, alkoxycarbonyl; R1 = H, acyl; R2 AB = SO2H) were prepared by treating I (R2 = OMe) with Na dithionite. I (R2 = SO3H) were prepared by oxidizing I (R2 = SO2H) or by treating I (R2 = OMe) with SO2 or K2SO3. Thus, 1 g I (R = R1 = Ac, R2 = OMe) was treated with Na dithionite to give 0.8 g I (R = R1 = Ac, R2 = SO2H), which at 0.12 mg/kg daily i.p. for 6 days increased the survival time of leukemia P388 infected mice by 190%.

Τ

77004-92-3 77004-94-5 77004-97-8

RL: RCT (Reactant); RACT (Reactant or reagent) (sulfination of)

77004-92-3 CAPLUS RN

CN 2-Propenamide, 3-(10-acety1-5,10,11,11a-tetrahydro-9-hydroxy-11-methoxy-8methyl-5-oxo-1H-pyrrolo[2,1-c][1,4]benzodiazepin-2-yl)- (CA INDEX NAME)

RN 77004-94-5 CAPLUS

CN 2-Propenamide, 3-[10-acety1-9-(acety10xy)-5,10,11,11a-tetrahydro-11-methoxy-8-methy1-5-oxo-1H-pyrrolo[2,1-c][1,4]benzodiazepin-2-y1]- (CA INDEX NAME)

RN 77004-97-8 CAPLUS

CN 2-Propenamide, 3-[10-acetyl-9-[(aminocarbonyl)oxy]-5,10,11,11a-tetrahydro-11-methoxy-8-methyl-5-oxo-1H-pyrrolo[2,1-c][1,4]benzodiazepin-2-yl]- (CA INDEX NAME)

L15 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1970:531049 CAPLUS Full-text

73:131049 DN

OREF 73:21357a,21360a

Antiprotozoal, anthelmintic, and antitumor benzodiazepine compounds TT

IN Leimgruber, Willy; Schenker, Fausto E.

PA Hoffmann-La Roche Inc.

U.S., 13 pp. SO CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

PATENT	NO. KIND	DATE	APPLICATION NO.	DATE
PI US 3523	941 A	19700811	US 1967-620618	19670306
PRAI US 1967	-620618 A	19670306		

GT For diagram(s), see printed CA Issue.

The acetates of I and II were prepared by acylation of the corresponding 9-OH AB derivative I (R1 = R2 = H, R3 = α -OMe) (III), or its hydrate. The epimers of I were prepared by acylating III, removing the elements of MeOH from the mol. by an 8 hr reflux with H2C:C(Me)OAc and treating the product with MeOH at room temperature Thus, III in 1:1 Ac20-NEt3 stirred 4 hr at 20° gave (11R,11aS)-5,10,11,11a-tetrahydro-9-hydroxy-11-methoxy-8- methyl-5-oxo- 1H-pyrrolo[2,1c][1,4]benzodiazepine-2-trans-acrylamide acetate (IV). (11S,11aS)-Epimer of IV was similarly prepared and had the same activity against S 180 and Ehrlich solid tumors in mice. II (R1 = H) stirred 2 hr at 20° in 1:1 Ac20-C5H5N gave II (R1 = Ac) (V). V in 4:1 H20-Me2CO kept 18 hr at 20° gave I (R1 = H, R2 = Ac, R3 = OH) (VI). V in C5H5N kept 3 days at 20° in AcOH-Ac2O gave I (R1 = R2 = Ac, R3 = AcO). Treatment of III.H2O with (EtCO)20-NEt3, (PrCO)20-NEt2, or Bz30-NEt3 gave I (R1 = EtCO, PrCO, or Bz). Similar acylations of III.H2O with PhNCO, EtNCO, or (EtO)2CO in the presence of NEt3 gave I (R1 = PhNHCO, EtNHCO, EtCO2). I are useful as antitumor agents against Sarcoma 180 and Ehrlich solid tumors in mice, as antiprotozoal agents against Entamoeba histolytica and Trichomonas vaginalis, and as anthelmintic agents against Syphacia obvelata.

29455-46-7P 29455-48-9P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

29455-46-7 CAPLUS

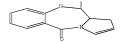
RN 1H-Pyrrolo[2,1-c][1,4]benzodiazepine-2-acrylamide, CN

10-acetyl-5,10,11,11a-tetrahydro-9,11-dihydroxy-8-methyl-5-oxo-, diacetate (ester), (E)-(S,S)-(+)- (8CI) (CA INDEX NAME)

29455-48-9 CAPLUS RN

CN 1H-Pyrrolo[2,1-c][1,4]benzodiazepine-2-acrylamide, 5,10,11,11a-tetrahydro-9-hydroxy-11-methoxy-8-methyl-5-oxo-10-propionyl-, propionate (ester), (E)-(11R,11aS)- (8CI) (CA INDEX NAME)

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=> d 12; d 16; d 111; d his; log y L2 HAS NO ANSWERS L1 STR
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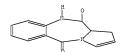
Structure attributes must be viewed using STN Express query preparation. L2 OUE ABB=ON PLU=ON L1

L6 HAS NO ANSWERS

L5 STR

Structure attributes must be viewed using STN Express query preparation. L6 $$\rm QUE$$ ABB=ON $\rm PLU=ON$ $\rm L5$

L11 HAS NO ANSWERS L10 STR



Structure attributes must be viewed using STN Express query preparation. L11 $$\tt QUE $\tt ABB=ON $\tt PLU=ON $\tt L10$$

(FILE 'HOME' ENTERED AT 10:40:14 ON 11 MAR 2009)

FILE 'REGISTRY' ENTERED AT 10:41:15 ON 11 MAR 2009 STRUCTURE UPLOADED QUE L1 L2 L3 8 S L2 L4 215 S L2 FUL L5 STRUCTURE UPLOADED L6 OUE L5 L7 5 S L6 SAM SUB=L4 L8 145 S L6 FUL SUB=L4 70 S L4 NOT L8 T.9

L10 STRUCTURE UPLOADED
L11 QUE L10

L12 2 S L11 SAM SUB=L9 L13 49 S L11 FUL SUB=L9

L14 21 S L9 NOT L13

FILE 'CAPLUS' ENTERED AT 10:45:45 ON 11 MAR 2009 5 5 S L14

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